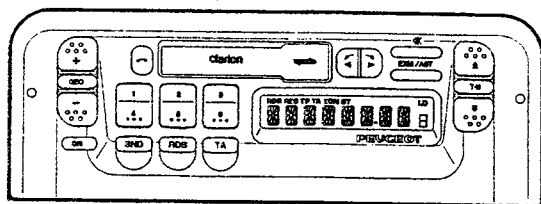
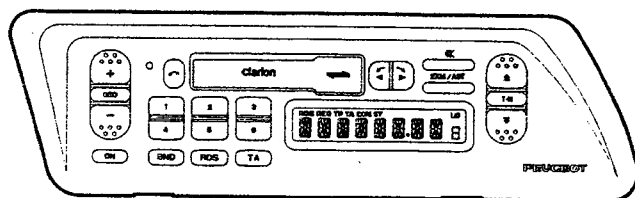


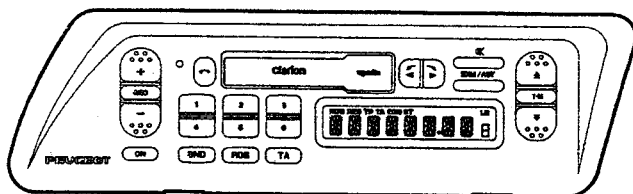
clarion Service Manual



PU-9970A



PU-9983A



PU-9983B

PEUGEOT Automobile Genuine RDS/FM/MW/LW Radio Cassette Stereo

Model **PU-9970A**
(Genuine No. 96 233 539 80)

Model **PU-9983A**
(Genuine No. 96 241 475 80)

Model **PU-9983B**
(Genuine No. 96 241 476 80)

SPECIFICATIONS

RADIO SECTION

Circuit system : Superheterodyne
Tuning system : Electronic tuning
Receive range: FM 87.5MHz to 108.0MHz
MW 531kHz to 1,602kHz
LW 153kHz to 279kHz

Intermediate frequency:

FM 10.7MHz
MW/LW 450kHz

Quieting sensitivity:

FM Less than 13dB
(at 30dB S/N)
MW Less than 33dB
(at 20dB S/N)
LW Less than 40dB
(at 20dB S/N)

Separation: FM More than 20dB

Auto tuning stop sensitivity:

FM DX: 25 ± 5 dB
LO: 50 ± 10 dB
MW DX: 30 ± 10 dB
LO: 50 ± 10 dB
LM DX: 30 ± 10 dB
LO: 50 ± 10 dB

Tape speed: 4.76cm/sec.
Wow and flutter: Less than 0.25% (W.R.M.S)
Separation: More than 35dB
Crosstalk: More than 40dB
S/N ratio: More than 45dB
FF/REW time: Less than 180sec. (C-60)

GENERAL

Load impedance: 4 Ω
Power output: More than 5W \times 4
(at max. output)
Power supply voltage:
DC 14.0V (10.8V to 15.6V)
Negative ground
Current consumption:
Less than 10A (at max. output)
Dimensions: Width 178mm
Height 50mm
Depth 146mm
Weight: 1.2kg

※ For improvement purposes, specifications and design are subject to change without prior notice.

TAPE SECTION

Reproduction system:
4 track, 2 channel, stereo cassette
deck

COMPONENTS

PU-9970A-A / PU-9983A-A / PU-9983B-A
Main unit

■ CAUTIONS

During repair or inspection, observe the followings.

1. Use specified parts.

The system uses parts with special safety characteristics against flame and voltage. Use only parts with equivalent characteristics when replacing them.

2. Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction, use of insulation tubes, bonding, gaps to P.W.B. etc. is involved. The wiring connection and routing to the P.W.B. are specially devised using clamps to keep away from heated and high-voltage parts. So, make sure to replace them back in their original positions after repair or inspection.

3. Check for safety after repair.

Check that the screws, parts, and wires are put back securely in their original position after repair. And make

sure for safety reasons there is no possibility of secondary problems around the repaired spots.

4. Cautions regarding chips.

Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, condensers, diodes, transistors, etc.). The negative pole of tantalum condensers is highly susceptible to heat, so use special care when replacing them, and check operation afterward.

5. Cautions in handling flexible P.W.B.

Before working with a soldering iron, make sure that the iron tip temperature is around 270°C. Take care not to apply the iron tip repeatedly (more than 3 times) to the same patterns. Also take care not to apply the tip with force.

■ COMPUTER ANTI-THEFT SYSTEM

This unit has a built-in Computer Anti-Theft System (CATS) which makes the radio inoperative if power to the unit is interrupted for any reason whatsoever (including disconnection and reconnection of the car battery). The radio will remain inoperative unless you enter the correct cats number.

RELEASE CATS

1. Press the power button to turn the power on.
2. "CODE IN" appears on the display.
3. Enter the code number using the preset buttons.
4. If the entered code number is correct, the radio turns on. A radio frequency appears on the display.

5. If the entered code number is incorrect, the numbers on the display and nothing happens.

6. To enter the code number again, press and hold down the band button for at least 3 seconds. "CODE IN" reappears on the display. Enter the correct code number.

7. If you enter an incorrect code number three times in succession, the system will not accept another code input for one hour, even if you press the band button for more than 3 seconds. If at the end of that hour you enter an incorrect code number again, you will have to wait another hour to try once more and so on.

■ ADJUSTMENTS

FM SECTION

Item	Procedure	Measuring instrument
S-meter	<ol style="list-style-type: none"> 1. Connect the milli volt-meter to TP101. 2. Input the 98.1MHz/30dBu (no MOD) degree SG signal. 3. Adjust VR101 so that the voltage of TP101 is in the range $2.4 \pm 0.1V$. 	SG Milli-volt meter
SD	<ol style="list-style-type: none"> 1. Input the 98.1MHz/28dBu (400Hz MOD 30%) degree SG signal. 2. Connect the ground to TP103. 3. Adjust VR102 so that the voltage of TP102 is in the range Lo to Hi. 	SG OSC

■ EXPLANATION OF IC

■ μ PD7006AGF-651-3B9 052-1303-01 Tuner controller for RDS

Outward From
80-pin plastic QFP

Terminal Discription

Pin No.	Symbol	I/O	Function
1	ST IND	I	Pin for lighting "ST" LCD while the input level is "L" during FM station reception.

Pin No.	Symbol	I/O	Function
2	RDS IND	I	Pin for input of RDS station signal from the RDS decoder IC.
3	SK IND	I	Pin for input of SK (traffic information station) signal from the RDS decoder IC.
4	DK IND	I	Pin for input of DK (announcement) signal from the RDS decoder IC.


PU-9970A

Pin No.	Symbol	I/O	Function
5	REMOCN IN	I	Pin for input from the 1-wire, voltage conversion type remote controller.
6	VSM	I	Pin used for signal (field strength) comparison during tracking of same program.
7	FM IF	I	Pin for input of FM IF frequency counter signal.
8	AM IF	I	Pin for input of MW/LW IF frequency counter signal.
9	RDS START	I	Pin for input of start signal from the RDS decoder IC.
10	RDS DATA	I	Pin for input of RDS data from the RDS decoder IC synchronized with RDS CLK.
11	RDS CLK	I	Pin for input of clock from the RDS decoder IC.
12	RDS RES	O	Pin used as the reset flag of synchronizing software.
13	RDS MUTE	O	MW/LW "L" output terminal which outputs "L" for 1 sec when FM power is switched ON.
14	VDD	-	Power pin.
15	AM OSC	I	Pin for input of MW/LW band VCO (receiving frequency +10.71MHz).
16	FM OSC	I	Pin for input of FM band VCO (receiving frequency +10.7MHz).
17	GND	-	Earth terminal.
18	EO	O	Pins for output of PLL error signals.
19	EO AM	O	
20	EO FM	O	
21	LW/MW FM	O	Pin for output of "H" during LW reception.
22	REM	O	Pin for system power control.
23	VOL CE	O	Pin for electronic volume control.
24	MUTE	O	Pin for system muting control (interlocked with electronic volume).
25	AM+B	O	Pin for MW/LW band power control.
26	FM+B	O	Pin for FM band power control.
27	LPF CONT	O	Pin for PLL low-pass filter control.
28	BEEP	O	Pin for output of pulse for generating beep sound.
29	B/U DET	I	Pin for detecting that the system back-up power is dropped.
30	VDD	-	Power pin.
31	CE	I	Pin for input of Chip Enable signal.
32	MOTOR	O	Pin for cassette deck power control.
33	GND	-	Earth pin.
34	X OUT	-	Pins for connection of X'tal oscillator.
35	X IN	-	
36	NC	-	Not in use.
37	ACC IN	I	Pin for detecting the accessory power input from the car.
38	VOL L	I	Pin for input of electronic volume signals (phase comparison method).
39	VOL R	I	
40	BAND/ILL	I	Pins for input of BAND key signal.
41~44	KO3~KO0	O	Pin for output of key scan signals.
45~52	KI7~KI0	I	Pin for input of key scan signals (pins 45 to 52 are not in use).
53	LCD KEY REQ	I	Pin for input of Key On signal from the LCD driver.
54	PHONE INT	I	Telephone signal port. MUTE is output while this Port is "H".
55	NC	-	Not in use.
56	SI	I	
57	SO	O	Serial data line to/from the LCD driver and electronic volume.
58	SCK	O	
59	REM OUT	O	STOP request signal for externally connected components.
60	REM IN	I	Operation signal from externally connected components.
61	GND	-	Earth pin.
62	LCD CS	O	Pin for output of LCD driver Chip Select signal.
63	NC	-	Not in use.
64	VDD	-	Power pin.
65	LCD OE	O	Pin for LCD driver control.
66	ILLUMI	O	Two cycles of "H" ↔ "L" are repeated when the BAND key is held for 2 sec. The initial status is "L". Because of the presence of the illumination line, "H" can be output even when Acc is OFF.

Pin No.	Symbol	I/O	Function
67	NC	-	Not in use.
68			
69	R/T	O	Pin for output for switching between the radio mode (L) and tape mode (H).
70	DOLBY ON/OFF	O	In Tape mode, alternates "H" and "L" every time the switch is pressed.
71	APC ON/OFF	O	In tape mode with APC ON, outputs "H" during FW/REW.
72	MTL ON/OFF	O	In tape mode, alternates "H" and "L" every time the switch is pressed.
73	FF/REW	I	In case the radio monitoring is used, radio broadcasting is monitored while this port is "L" with the cassette pack in.
74	PACK IN	I	L: Cassette pack present (tape mode). H: Cassette pack absent (radio mode).
75	FOR/REV	I	Cassette tape transport direction. (In tape mode, outputs MUTE when the port status changes.)
76	FM SD	I	Pin for station detection during tracking of same programme while auto tuning (Seek, AS, PS) is activated.
77	DX/LO	O	Pin used during Seek and AS (usually "L").
78	RDS SD	O	Pin used during Seek, AS and auto tracking in FM mode (usually "L").
79	IF REQ	O	Outputs "L" when IF count is required during Seek, AS and PS (usually "H").
80	IF MUTE	O	Outputs signal during auto tracking operation.

Key Matrix Table

KEY OUT	KEY IN	KI 0 (52 pin)	KI 1 (51 pin)	KI 2 (50 pin)	KI 3 (49 pin)
KO 0 (44 pin)		D SW0	D SW1	D SW2	D SW3
KO 1 (43 pin)		BAND AM	RADIO MONITOR	E VOL FADER	T MODE
KO 2 (42 pin)		LOUD KEY	FF/REW		

 : Diode SW

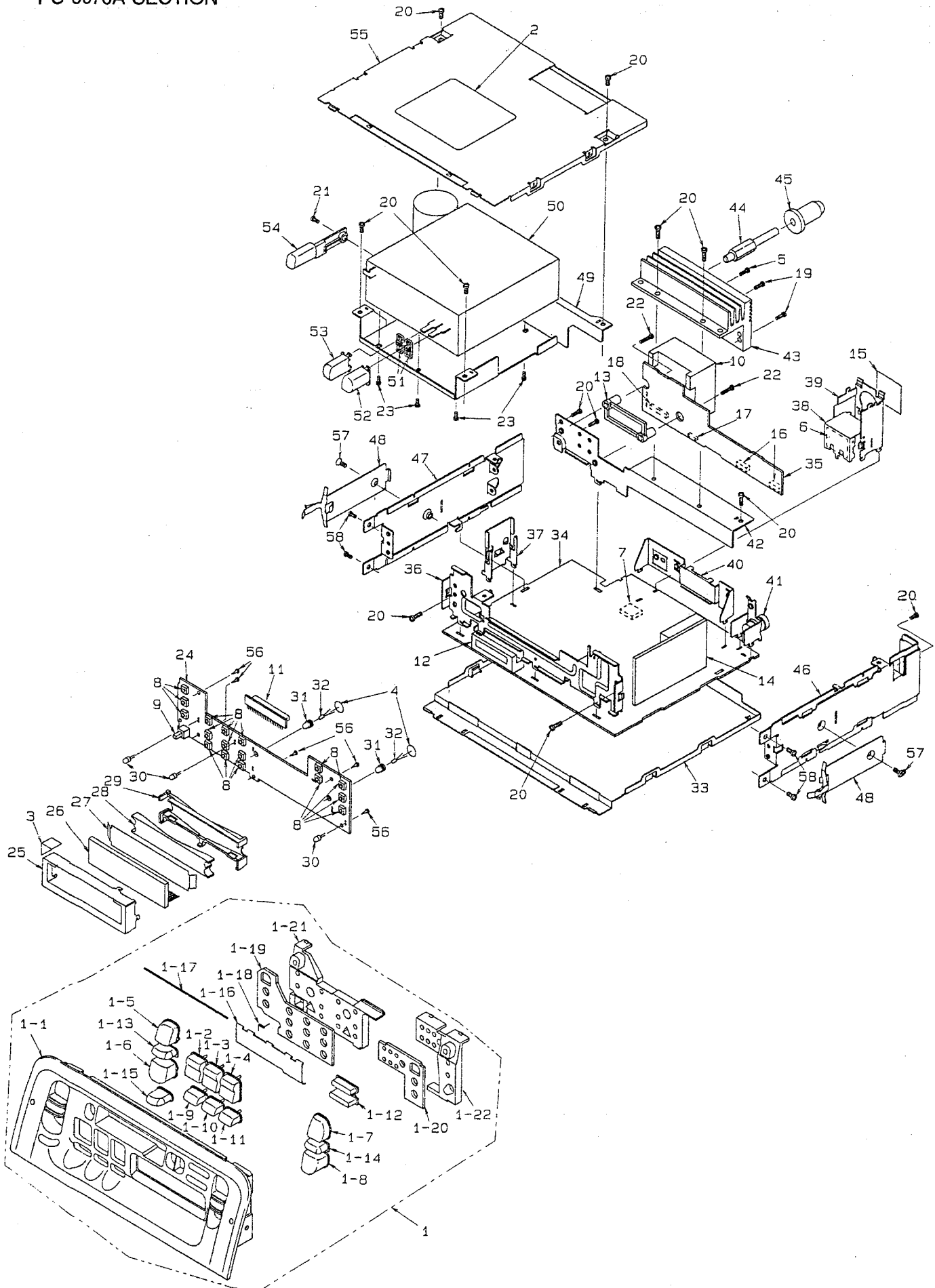
Diode SW

*In the table below, "O" means that diode SW is OFF (OPEN) and "I" means that diode SW is ON (SHORT).

Switch name	Function																									
D SW0 D SW1	Select the initial setting of AS (Auto Store). <table><tr><th>D SW0</th><th>D SW1</th><th>Function</th></tr><tr><td>0</td><td>0</td><td>Both FM 1 and</td></tr><tr><td>0</td><td>1</td><td>FM 2 bands</td></tr><tr><td>1</td><td>0</td><td rowspan="2">FM 2 band only</td></tr><tr><td>1</td><td>1</td></tr></table>	D SW0	D SW1	Function	0	0	Both FM 1 and	0	1	FM 2 bands	1	0	FM 2 band only	1	1											
D SW0	D SW1	Function																								
0	0	Both FM 1 and																								
0	1	FM 2 bands																								
1	0	FM 2 band only																								
1	1																									
D SW2 D SW3	Select the availabilities of the APC, Dolby and MTL function. <table><tr><th>D SW2</th><th>D SW3</th><th colspan="3">Function</th></tr><tr><td>0</td><td>0</td><td>APC: OFF.</td><td>DOLBY: OFF.</td><td>MTL: OFF.</td></tr><tr><td>0</td><td>1</td><td>APC: OFF.</td><td>DOLBY: OFF.</td><td>MTL: ON.</td></tr><tr><td>1</td><td>0</td><td>APC: OFF.</td><td>DOLBY: ON.</td><td>MTL: 0</td></tr><tr><td>1</td><td>1</td><td>APC: ON.</td><td>DOLBY: ON.</td><td>MTL: ON.</td></tr></table>	D SW2	D SW3	Function			0	0	APC: OFF.	DOLBY: OFF.	MTL: OFF.	0	1	APC: OFF.	DOLBY: OFF.	MTL: ON.	1	0	APC: OFF.	DOLBY: ON.	MTL: 0	1	1	APC: ON.	DOLBY: ON.	MTL: ON.
D SW2	D SW3	Function																								
0	0	APC: OFF.	DOLBY: OFF.	MTL: OFF.																						
0	1	APC: OFF.	DOLBY: OFF.	MTL: ON.																						
1	0	APC: OFF.	DOLBY: ON.	MTL: 0																						
1	1	APC: ON.	DOLBY: ON.	MTL: ON.																						
BAND AM	Select the availability of the AM band. 0 : AM band unavailable. 1 : AM band available.																									
RADIO MONITOR	Select the availability of the radio monitoring function. (reproducing radio during FF/REW) 0 : Radio monitoring unavailable. 1 : Radio monitoring available.																									
E VOL FADER	Select the availability of the fader function with the electric volume. 0 : Fader unavailable. 1 : Fader monitoring available.																									
T MODE	Select the availability of the tuning mode function (auto and manual). 0 : Tuning mode unavailable. 1 : Tuning mode available.																									
LOUD KEY	Select the availability of the loudness control function. 0 : Loudness unavailable. 1 : Loudness available.																									
FF/REW	Select the functions of FF and REW 0 : <input type="button" value="<<"/> <input type="button" value=">>"/> available. 1 : <input type="button" value="<<"/> <input type="button" value=">>"/> available.																									

EXPLODED VIEW • PARTS LIST

PU-9970A SECTION

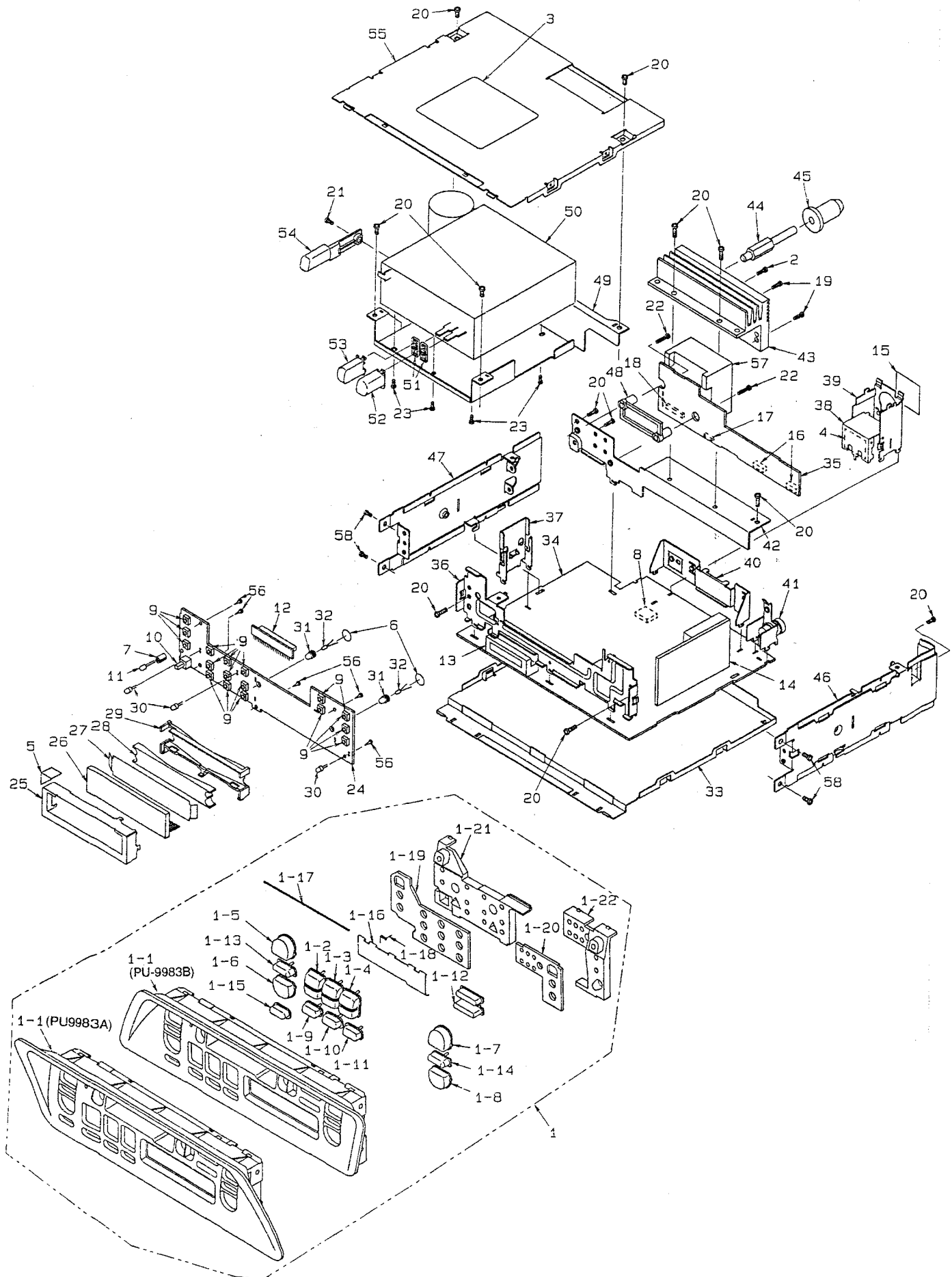


NO.	PART NO.	DESCRIPTION	QTY
1	940-7726-00	ESCUTCHEON ASS'Y	1
1-1	370-5546-00	ESCUTCHEON	1
1-2	382-3952-00	BUTTON (1/4)	1
1-3	382-3953-00	BUTTON (2/5)	1
1-4	382-3954-00	BUTTON (3/6)	1
1-5	382-3955-00	BUTTON (+)	1
1-6	382-3956-00	BUTTON (-)	1
1-7	382-3957-00	BUTTON (UP)	1
1-8	382-3958-00	BUTTON (DOWN)	1
1-9	382-3959-00	BUTTON (BND)	1
1-10	382-3960-00	BUTTON (RDS)	1
1-11	382-3961-00	BUTTON (TA)	1
1-12	382-3962-00	BUTTON (MUTE/EXM)	1
1-13	382-3963-00	BUTTON (GEO)	1
1-14	382-3964-00	BUTTON (T-M)	1
1-15	382-3965-00	BUTTON (ON)	1
1-16	320-0485-84	DUSTPROOF COVER	1
1-17	341-1278-01	SHAFT	1
1-18	750-2530-04	SPRING	1
1-19	345-7675-00	CUSHON RUBBER (L)	1
1-20	345-7676-00	CUSHON RUBBER (R)	1
1-21	335-4951-00	ILLUMI PLATE (L)	1
1-22	335-4952-00	ILLUMI PLATE (R)	1
2	286-8497-00	SETPLATE	1
3	347-2022-00	SHADE	1
4	353-0359-00	SHADE	2
5	714-3012-81	MACHINE SCREW	1
6	347-4001-0L	INSULATOR	1
7	345-7495-0L	INSULATOR	1
8	013-3978-01	SWITCH	17
9	013-3849-00	SWITCH (ON)	1
10	074-0930-12	OUTLET SOCKET (ISO)	1
11	076-0481-00	PLUG	1
12	074-1058-00	OUTLET SOCKET	1
13	335-4708-0L	SPACER	1
14	880-2076A	TUNER PACK	1
15	347-3977-0L	LABEL	1
16	076-0390-04	PLUG (4P SP)	2
17	076-0324-04	PLUG (4P B/U)	1
18	076-0482-0L	PLUG	1

NO.	PART NO.	DESCRIPTION	QTY
19	714-3010-81	MACHINE SCREW	2
20	731-3006-80	TAP TIGHT	12
21	716-1580-00	SCREW	1
22	714-3025-11	MACHINE SCREW	2
23	714-3004-81	MACHINE SCREW	4
24	039-0560-00	SWITCH PWB	1
25	331-0416-0L	LCD COVER	1
26	379-1041-41	INDICATOR	1
27	347-3953-0L	FILM	1
28	335-4707-02	ILLUMI PLATE	1
29	335-4706-0L	LCD HOLDER	1
30	017-0420-11	PILOT LAMP (14V 40mA)	3
31	345-3814-75	LAMP CAP	2
32	017-0414-00	PILOT LAMP (8V 70mA)	2
33	311-1652-00	LOWER CASE	1
34	039-0181-01	MAIN PWB	1
35	039-0561-00	CONNECTOR PWB	1
36	309-0648-10	FRONT PLATE	1
37	313-1577-0L	HEAT SINK	1
38	331-0413-0L	SHIELD PLATE	1
39	331-0412-0L	CONNECTOR HOLDER	1
40	331-1680-00	IC HOLDER	1
41	092-0668-00	ANT HOLDER	1
42	331-1679-00	BACK PLATE	1
43	313-1628-00	HEAT SINK	1
44	716-1728-00	REAR BOLT	1
45	345-4847-01	STOPPER	1
46	331-1677-00	SIDE COVER (R)	1
47	331-1678-00	SIDE COVER (L)	1
48	750-3182-00	SIDE SPRING	2
49	331-0410-10	MECH.BRACKET	1
50	930-0722-86	TAPE MECHANISM	1
51	335-4358-00	BUTTON SPACER	2
52	382-3950-00	BUTTON (FF)	1
53	382-3951-00	BUTTON (REW)	1
54	382-3949-00	BUTTON (EJECT)	1
55	310-1582-00	UPPER CASE	1
56	716-0778-00	SCREW	5
57	731-3008-40	TAP TIGHT	2
58	714-3005-81	MACHINE SCREW	4

■ EXPLODED VIEW • PARTS LIST

PU-9983A / PU-9983B SECTION



NO.	PART NO.	DESCRIPTION	QTY
1	940-7728-00	ESCUTCHEON ASS'Y (PU-9983A)	1
	940-7729-00	ESCUTCHEON ASS'Y (PU-9983B)	1
1-1	370-5551-00	ESCUTCHEON (PU-9983A)	1
	370-5552-00	ESCUTCHEON (PU-9983B)	1
1-2	382-4041-00	BUTTON (1/4)	1
1-3	382-4042-00	BUTTON (2/5)	1
1-4	382-4043-00	BUTTON (3/6)	1
1-5	382-3970-00	BUTTON (+)	1
1-6	382-3971-00	BUTTON (-)	1
1-7	382-3972-00	BUTTON (UP)	1
1-8	382-3973-00	BUTTON (DOWN)	1
1-9	382-3974-00	BUTTON (BND)	1
1-10	382-3975-00	BUTTON (RDS)	1
1-11	382-3976-00	BUTTON (TA)	1
1-12	382-3979-00	BUTTON (MUTE/EXM)	1
1-13	382-3977-00	BUTTON (GEO)	1
1-14	382-3978-00	BUTTON (T-M)	1
1-15	382-3980-00	BUTTON (ON)	1
1-16	320-0485-84	DUSTPROOF COVER	1
1-17	341-1278-01	SHAFT	1
1-18	750-2530-04	SPRING	1
1-19	345-7675-00	CUSHON RUBBER (L)	1
1-20	345-7676-00	CUSHON RUBBER (R)	1
1-21	335-4951-00	ILLUMI PLATE (L)	1
1-22	335-4952-00	ILLUMI PLATE (R)	1
2	714-3012-81	MACHINE SCREW	1
3	286-8497-02	SETPLATE (PU-9983A)	1
	286-8497-03	SETPLATE (PU-9983B)	1
4	347-4001-0L	INSULATOR	1
5	347-2022-00	SHADE	1
6	353-0359-00	SHADE	2
7	335-4513-01	SPACER	1
8	345-7495-0L	INSULATOR	1
9	013-3978-01	SWITCH	17
10	013-3849-00	SWITCH (ON)	1
11	001-0207-00	DIODE	1
12	076-0481-00	PLUG	1
13	074-1058-00	OUTLET SOCKET	1
14	880-2076A	TUNER PACK	1
15	347-3977-0L	LABEL	1
16	076-0390-04	PLUG (4P SP)	2
17	076-0324-04	PLUG (4P B/U)	1

NO.	PART NO.	DESCRIPTION	QTY
18	076-0482-0L	PLUG	1
19	714-3010-81	MACHINE SCREW	2
20	731-3006-80	TAP TIGHT	12
21	716-1580-00	SCREW	1
22	714-3025-11	MACHINE SCREW	2
23	714-3004-81	MACHINE SCREW	4
24	039-0560-00	SWITCH PWB	1
25	331-0416-0L	LCD COVER	1
26	379-1041-41	INDICATOR	1
27	347-3953-0L	FILM	1
28	335-4707-02	ILLUMI PLATE	1
29	335-4706-0L	LCD HOLDER	1
30	017-0420-11	PILOT LAMP (14V 40mA)	3
31	345-3814-75	LAMP CAP	2
32	017-0414-00	PILOT LAMP (8V 40mA)	2
33	311-1652-00	LOWER CASE	1
34	039-0181-01	MAIN PWB	1
35	039-0561-00	CONNECTOR PWB	1
36	309-0648-10	FRONT PLATE	1
37	313-1577-0L	HEAT SINK	1
38	331-0413-0L	SHIELD PLATE	1
39	331-0412-0L	CONNECTOR HOLDER	1
40	331-1680-00	IC HOLDER	1
41	092-0668-00	ANT HOLDER	1
42	331-1679-00	BACK PLATE	1
43	313-1628-00	HEAT SINK	1
44	716-1728-00	REAR BOLT	1
45	345-4847-01	STOPPER	1
46	331-1677-00	SIDE COVER (R)	1
47	331-1678-00	SIDE COVER (L)	1
48	335-4708-0L	SPACER	1
49	331-0410-10	MECH.BRACKET	1
50	930-0722-86	TAPE MECHANISM	1
51	335-4358-00	BUTTON SPACER	2
52	382-3950-00	BUTTON (FF)	1
53	382-3951-00	BUTTON (REW)	1
54	382-3949-00	BUTTON (EJECT)	1
55	310-1582-00	UPPER CASE	1
56	716-0778-00	SCREW	5
57	074-0930-13	OUTLET SOCKET	1
58	714-3005-81	MACHINE SCREW	4

PARTS LIST

SWITCH PWB SECTION

REF No.	PART No.	DESCRIPTION
C 1	178-1042-78	0.1uF
C 2	178-1042-78	0.1uF
D 6	001-0525-00	IMN10
D 7	001-0525-00	IMN10
D 100	001-0207-00	TLR124
IC 1	051-6001-01	uPD16431AGC-7ET
PL 100	017-0414-00	8V 70mA
PL 101	017-0414-00	8V 70mA
PL 102	017-0420-11	14V 40mA
PL 103	017-0420-11	14V 40mA
PL 104	017-0420-11	14V 40mA

Note) Several different parts of the same reference number are alternative parts.
One of those parts is used in the set.

REF No.	PART No.	DESCRIPTION
R 1	117-1031-10	1/10W 10kohm
R 2	117-1041-10	1/10W 100kohm
R 3	117-1031-10	1/10W 10kohm
S 1	013-3978-01	
S 2	013-3978-01	
S 3	013-3978-01	
S 4	013-3978-01	
S 5	013-3978-01	
S 6	013-3978-01	
S 7	013-3978-01	
S 10	013-3978-01	

REF No.	PART No.	DESCRIPTION
S 11	013-3978-01	
S 12	013-3978-01	
S 13	013-3978-01	
S 14	013-3978-01	
S 15	013-3978-01	
S 16	013-3978-01	
S 17	013-3978-01	
S 18	013-3978-01	
S 19	013-3978-01	
S 20	013-3849-00	

MAIN PWB SECTION

REF No.	PART No.	DESCRIPTION
C 101	178-2232-78	0.022uF
C 106	178-4722-78	4700pF
C 107	178-1022-78	1000pF
C 108	183-4753-51	35V4.7uF
C 109	183-4753-51	35V4.7uF
C 110	178-1532-78	0.015uF
C 111	178-1532-78	0.015uF
C 112	183-2253-62	50V2.2uF
C 113	178-3332-78	0.033uF
C 114	183-1053-61	50V1uF
C 115	172-3931-11	0.039uF
C 116	178-5622-78	5600pF
C 202	178-1042-78	0.1uF
C 203	178-1042-78	0.1uF
C 204	183-1063-51	35V10uF
C 206	176-1011-00	100pF CH
C 207	176-1011-00	100pF CH
C 208	176-1011-00	100pF CH
C 209	176-2201-00	22pF CH
C 210	176-2201-00	22pF CH
C 211	178-1022-78	1000pF
C 212	178-1022-78	1000pF
C 213	178-1022-78	1000pF
C 301	178-3312-78	330pF
C 302	183-2253-62	50V2.2uF
C 303	183-4763-11	6.3V47uF
C 304	178-5612-78	560pF
C 305	176-8201-00	82pF CH
C 306	176-4701-00	47pF CH
C 307	178-1042-78	0.1uF
C 401	173-6812-10	680pF
C 402	183-1053-62	50V1uF
C 403	183-1073-12	6.3V100uF
C 404	178-2732-78	0.027uF
C 405	173-6812-10	680pF
C 406	183-1053-62	50V1uF
C 407	183-1073-12	6.3V100uF
C 408	178-2732-78	0.027uF
C 409	183-1063-51	35V10uF
C 411	183-1053-61	50V1uF
C 413	183-1053-61	50V1uF
C 415	183-4753-62	50V4.7uF
C 416	183-4753-62	50V4.7uF
C 417	183-4753-62	50V4.7uF
C 418	183-4753-51	35V4.7uF
C 419	183-1073-21	10V100uF
C 420	184-2273-12	6.3V220uF
C 422	183-1063-51	35V10uF
C 424	183-4753-62	50V4.7uF
C 425	178-3922-78	3900pF
C 426	178-3332-78	0.033uF
C 427	183-1063-51	35V10uF
C 428	178-6822-78	6800pF
C 429	178-1042-78	0.1uF
C 430	178-1042-78	0.1uF
C 432	183-1063-51	35V10uF
C 433	183-4753-51	35V4.7uF

REF No.	PART No.	DESCRIPTION
C 434	183-4753-51	35V4.7uF
C 435	183-1063-31	16V10uF
C 436	183-1063-31	16V10uF
C 437	183-4753-51	35V4.7uF
C 438	178-3922-78	3900pF
C 439	178-3332-78	0.033uF
C 440	183-1063-51	35V10uF
C 441	178-6822-78	6800pF
C 442	178-1042-78	0.1uF
C 443	178-1042-78	0.1uF
C 445	183-1063-31	16V10uF
C 446	183-4753-51	35V4.7uF
C 447	183-4753-51	35V4.7uF
C 448	183-4753-62	50V4.7uF
C 449	183-4753-62	50V4.7uF
C 450	183-4753-62	50V4.7uF
C 451	183-4753-62	50V4.7uF
C 452	178-6812-78	680pF
C 453	178-6812-78	680pF
C 454	178-6812-78	680pF
C 455	178-6812-78	680pF
C 460	183-1063-31	16V10uF
C 461	172-1041-11	0.1uF
C 462	172-1041-11	0.1uF
C 463	172-1041-11	0.1uF
C 464	172-1041-11	0.1uF
C 465	172-1041-11	0.1uF
C 466	172-1041-11	0.1uF
C 467	172-1041-11	0.1uF
C 468	172-1041-11	0.1uF
C 469	183-1063-31	16V10uF
C 470	172-1041-11	0.1uF
C 471	042-0447-00	16V2200uF
C 473	183-1073-21	10V100uF
C 474	183-4753-51	35V4.7uF
C 475	178-1042-78	0.1uF
C 501	178-1022-78	1000pF
C 502	178-1032-78	0.01uF
C 503	182-4763-22	10V47uF
C 504	184-2273-22	10V220uF
C 505	183-1053-61	50V1uF
C 508	182-1073-32	16V100uF
C 510	183-4763-31	16V47uF
C 512	042-0200-00	10V47uF
C 551	183-1053-61	50V1uF
CCT201	050-0077-02	10kohmx4
CCT202	050-0077-02	10kohmx4
D 101	001-0366-00	LTX-MR15
D 102	001-0330-00	1SS119
D 203	001-0330-00	1SS119
D 204	001-0330-00	1SS119
D 205	001-0361-10	1SS198
D 501	001-0330-00	1SS119
D 502	001-0330-00	1SS119
D 503	001-0361-10	1SS198
D 504	001-0377-48	MA4091H
D 506	001-0330-00	1SS119

REF No.	PART No.	DESCRIPTION
D 507	001-0377-45	MA4082H
D 510	001-0188-01	1S1885A
D 511	001-0466-00	S5688B
D 513	001-0377-40	MA4075L
D 515	001-0503-36	HZS7A1L
D 901	001-0377-35	MA4062M
D 902	001-0466-00	S5688B
D 903	001-0466-00	S5688B
IC 201	052-1303-01	uPD17006AGF-651-3B9
IC 202	051-1375-35	
IC 202	051-1375-65	
IC 301	051-1819-00	SAA6579T
IC 401	051-0301-01	uPC1228HA
IC 402	051-1038-00	CXA1102P
IC 403	051-5000-00	LC7538NM
IC 404	051-0422-51	NJM4558D
IC 405	051-0287-51	NJM2058D
IC 406	051-2002-00	HA13151
IC 501	051-0869-00	MB3771P(-G)
L 101	010-2230-00	0.15uH
L 102	010-2003-04	
L 301	010-2198-00	0.15uH
L 501	010-2230-50	47uH
L 502	009-0470-63	
L 503	010-2230-19	5.6uH
Q 101	125-2004-03	RN1403
Q 102	125-2004-03	RN1403
Q 103	103-1306-00	2SD1306
Q 104	102-2712-51	2SC2712G.L
Q 105	102-2712-51	2SC2712G.L
Q 106	102-3624-00	2SC3624
Q 107	102-3624-00	2SC3624
Q 108	125-2004-03	RN1403
Q 109	125-2004-03	RN1403
Q 203	125-2004-06	RN1406
Q 204	102-2712-00	2SC2712
Q 403	103-1306-00	2SD1306
Q 404	103-1306-00	2SD1306
Q 405	103-1306-00	2SD1306
Q 406	103-1306-00	2SD1306
Q 407	125-0002-03	RN2403
Q 501	100-1162-00	2SA1162
Q 502	125-2004-02	RN1402
Q 503	102-3420-00	2SC3420
Q 504	101-1398-00	2SB1398
Q 505	102-2712-00	2SC2712
Q 508	102-3420-00	2SC3420
Q 509	191-0624-0L	2SB624
Q 510	100-1162-50	2SA1162Y.G
Q 511	125-2004-03	RN1403
Q 513	125-2004-02	RN1402
Q 514	191-1068-0L	2SB1068-L,L,U-T
Q 515	103-1858-00	2SD1858
Q 901	125-2004-03	RN1403
R 101	117-1031-10	1/10W 10kohm
R 102	117-1231-10	1/10W 12kohm

PU-9970A

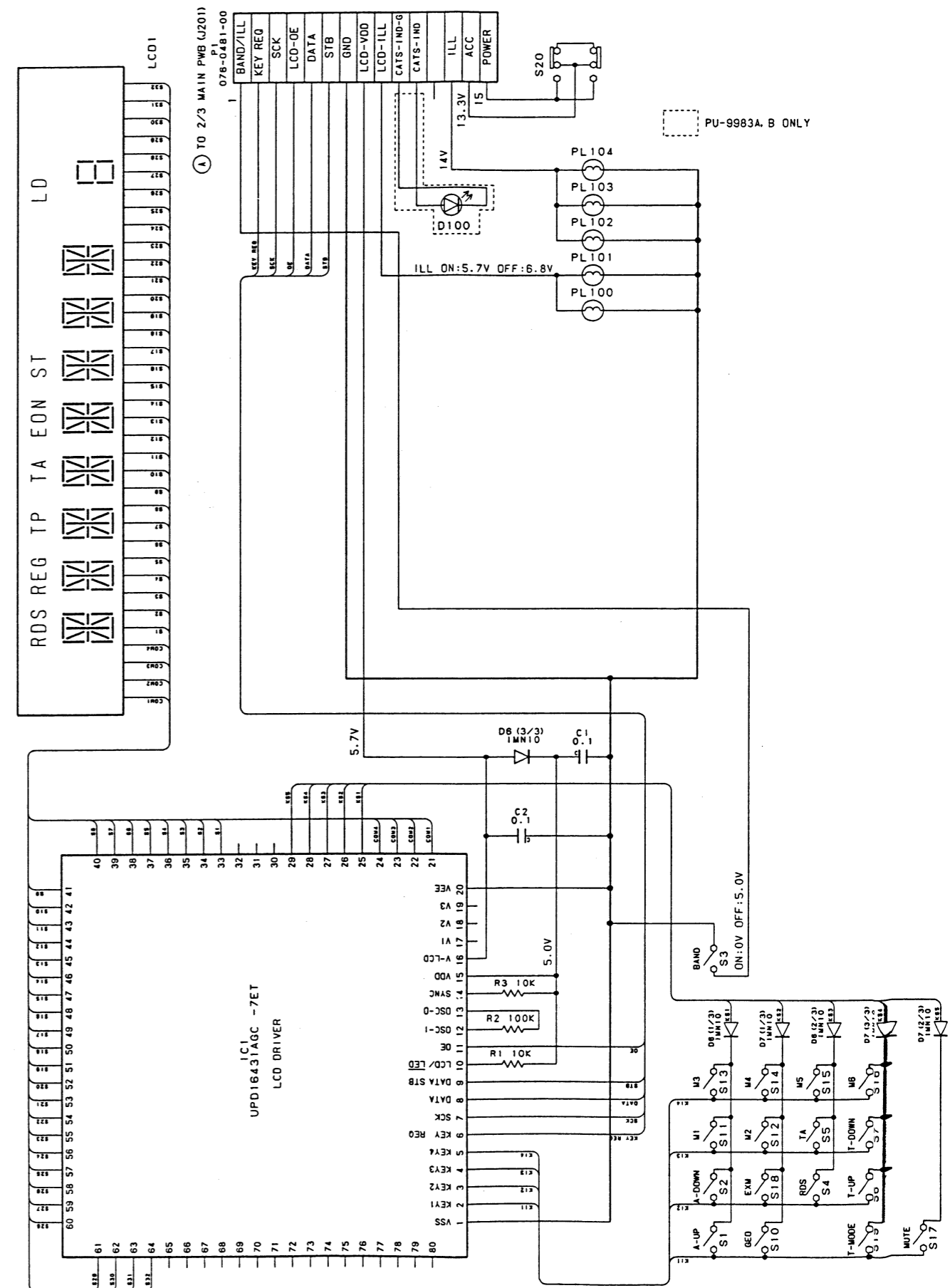
REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
R 103	117-6821-10	1/10W 6.8kohm	R 422	111-2221-91	1/4WS 2.2kohm	R 501	117-1051-10	1/10W 1Mohm
R 104	117-1041-10	1/10W 100kohm	R 423	111-2221-91	1/4WS 2.2kohm	R 502	117-1041-10	1/10W 100kohm
R 105	117-1021-10	1/10W 1kohm	R 424	117-2221-10	1/10W 2.2kohm	R 503	117-1541-10	1/10W 150kohm
R 109	117-2231-10	1/10W 22kohm	R 425	117-1041-10	1/10W 100kohm	R 504	117-1831-10	1/10W 18kohm
R 110	117-3321-10	1/10W 3.3kohm	R 426	117-1041-10	1/10W 100kohm	R 505	117-1031-10	1/10W 10kohm
R 111	117-3321-10	1/10W 3.3kohm	R 427	117-1041-10	1/10W 100kohm	R 506	117-6821-10	1/10W 6.8kohm
R 112	117-3321-10	1/10W 3.3kohm	R 428	117-1041-10	1/10W 100kohm	R 507	117-1541-10	1/10W 150kohm
R 113	117-3321-10	1/10W 3.3kohm	R 429	117-1041-10	1/10W 100kohm	R 508	117-1241-10	1/10W 120kohm
R 114	117-5621-10	1/10W 5.6kohm	R 430	117-1041-10	1/10W 100kohm	R 509	117-3931-10	1/10W 39kohm
R 115	117-2221-10	1/10W 2.2kohm	R 431	117-1041-10	1/10W 100kohm	R 510	117-5131-10	1/10W 51kohm
R 116	117-1021-10	1/10W 1kohm	R 432	117-1041-10	1/10W 100kohm	R 511	117-8221-10	1/10W 8.2kohm
R 117	117-2221-10	1/10W 2.2kohm	R 433	117-2741-10	1/10W 270kohm	R 512	111-6811-81	1/2WS 680ohm
R 118	117-6821-10	1/10W 6.8kohm	R 434	117-2741-10	1/10W 270kohm	R 513	111-4711-91	1/4WS 470ohm
R 119	117-1021-10	1/10W 1kohm	R 435	117-2741-10	1/10W 270kohm	R 515	117-3321-10	1/10W 3.3kohm
R 204	117-4711-10	1/10W 470ohm	R 436	117-2741-10	1/10W 270kohm	R 516	111-1021-91	1/4WS 1kohm
R 205	117-4721-10	1/10W 4.7kohm	R 441	117-3311-10	1/10W 330ohm	R 517	111-2211-91	1/4WS 220ohm
R 206	117-1031-10	1/10W 10kohm	R 442	117-3311-10	1/10W 330ohm	R 518	111-1031-91	1/4WS 10kohm
R 207	117-1031-10	1/10W 10kohm	R 443	117-3311-10	1/10W 330ohm	R 519	111-3311-81	1/2WS 330ohm
R 208	117-3321-10	1/10W 3.3kohm	R 444	117-3311-10	1/10W 330ohm	R 520	117-6821-10	1/10W 6.8kohm
R 209	117-1031-10	1/10W 10kohm	R 445	117-1021-10	1/10W 1kohm	R 521	117-1031-10	1/10W 10kohm
R 210	117-1041-10	1/10W 100kohm	R 446	117-1021-10	1/10W 1kohm	R 526	111-5611-91	1/4WS 560ohm
R 211	117-1011-10	1/10W 100ohm	R 447	117-1531-10	1/10W 15kohm	R 528	117-1031-10	1/10W 10kohm
R 212	117-1021-10	1/10W 1kohm	R 448	117-1531-10	1/10W 15kohm	R 529	117-1031-10	1/10W 10kohm
R 213	117-5621-10	1/10W 5.6kohm	R 449	117-1531-10	1/10W 15kohm	R 530	111-4721-91	1/4WS 4.7kohm
R 214	117-1051-10	1/10W 1Mohm	R 450	117-1531-10	1/10W 15kohm	R 531	111-3321-91	1/4WS 3.3kohm
R 301	117-2221-10	1/10W 2.2kohm	R 451	117-1031-10	1/10W 10kohm	R 532	117-1031-10	1/10W 10kohm
R 401	117-3331-10	1/10W 33kohm	R 452	117-1031-10	1/10W 10kohm	R 533	117-1031-10	1/10W 10kohm
R 402	117-8201-10	1/10W 82ohm	R 453	117-1031-10	1/10W 10kohm	R 534	111-1021-91	1/4WS 1kohm
R 403	117-4721-10	1/10W 4.7kohm	R 454	117-1031-10	1/10W 10kohm	R 535	111-1031-91	1/4WS 10kohm
R 404	117-1241-10	1/10W 120kohm	R 455	117-2291-10	1/10W 2.2ohm	R 536	114-2711-11	1W 270ohm
R 405	117-3331-10	1/10W 33kohm	R 456	117-2291-10	1/10W 2.2ohm	R 540	111-8211-81	1/2WS 820ohm
R 406	117-8201-10	1/10W 82ohm	R 457	117-2291-10	1/10W 2.2ohm	R 549	111-1031-91	1/4WS 10kohm
R 407	117-4721-10	1/10W 4.7kohm	R 458	117-2291-10	1/10W 2.2ohm	R 905	117-6821-10	1/10W 6.8kohm
R 408	117-1241-10	1/10W 120kohm	R 459	117-2291-10	1/10W 2.2ohm	R 907	117-6821-10	1/10W 6.8kohm
R 409	111-2201-91	1/4WS 22ohm	R 460	117-2291-10	1/10W 2.2ohm	SUP101	060-0122-10	DSP-201M-S00B
R 413	117-6821-10	1/10W 6.8kohm	R 461	117-2291-10	1/10W 2.2ohm	T 501	009-0666-0L	
R 416	117-6821-10	1/10W 6.8kohm	R 462	117-2291-10	1/10W 2.2ohm	VR 101	012-4431-13	470kohm
R 419	117-4331-10	1/10W 43kohm	R 463	117-3321-10	1/10W 3.3kohm	VR 102	012-4431-06	10kohm
R 420	117-2231-10	1/10W 22kohm	R 464	117-3921-10	1/10W 3.9kohm	X 201	061-1064-00	4.5MHz
R 421	117-2231-10	1/10W 22kohm	R 466	117-1031-10	1/10W 10kohm	X 301	061-3013-00	4.33MHz

CONNECTOR PWB SECTION

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C 550	178-1042-78	0.1uF	R 553	117-5611-10	1/10W 560ohm	R 557	117-4721-10	1/10W 4.7kohm
F 501	060-0057-56	10A	R 554	117-8211-10	1/10W 820ohm	R 558	117-6821-10	1/10W 6.8kohm
R 551	117-3311-10	1/10W 330ohm	R 555	117-1221-10	1/10W 1.2kohm	R 559	117-8221-10	1/10W 8.2kohm
R 552	117-3911-10	1/10W 390ohm	R 556	117-2021-10	1/10W 2kohm			

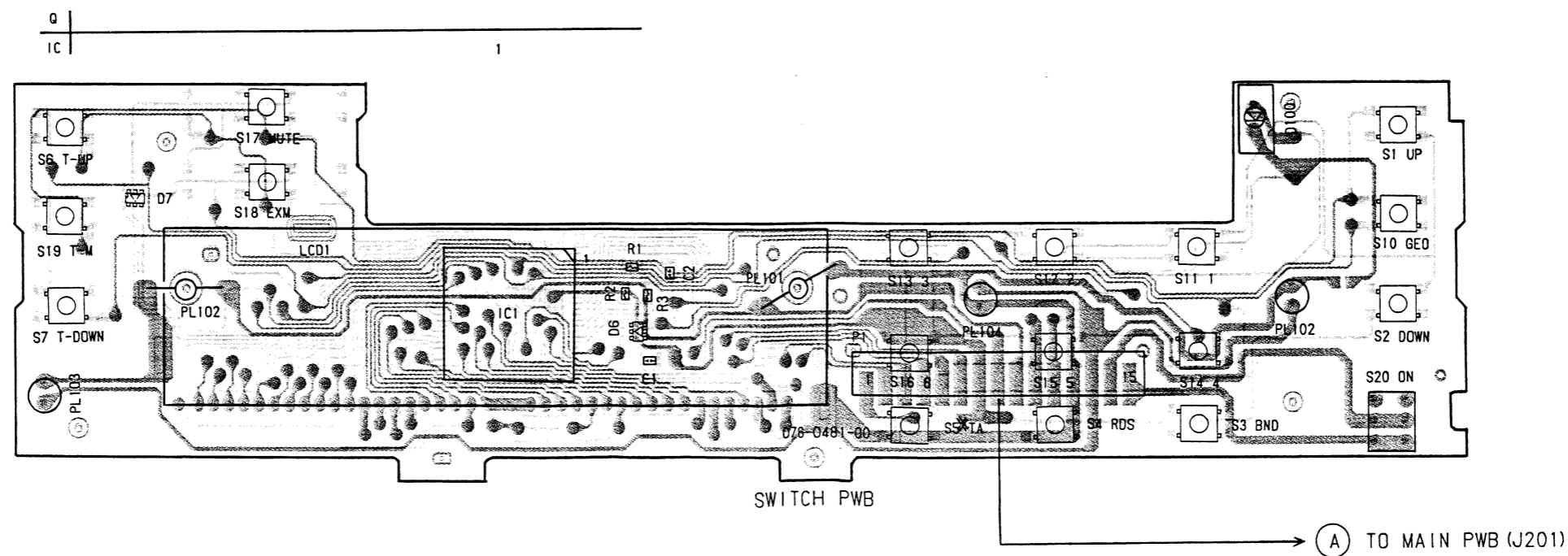
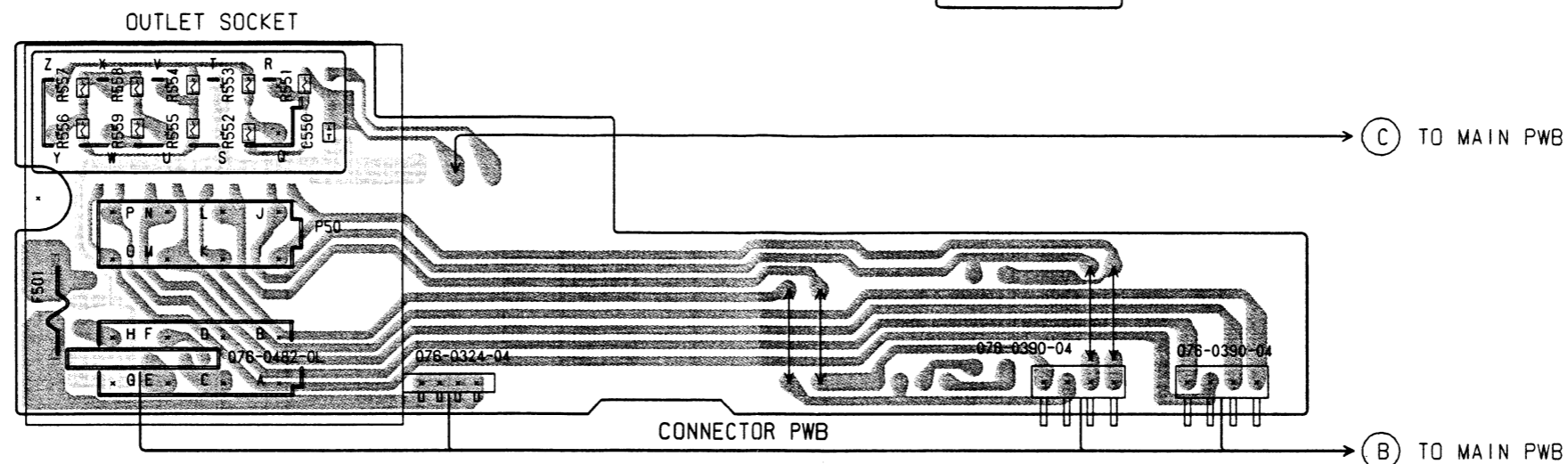
CIRCUIT DIAGRAM 1/3

SWITCH PWB SECTION

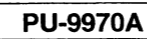


■ PRINTED WIRING BOARD 1/2
CONNECTOR PWB/SWITCH PWB SECTION

A. -	I. REAR RCH-	Q. -	Y. -
B. -	J. REAR RCH+	R. -	Z. -
C. BACK UP	K. FRONT RCH-	S. -	
D. -	L. FRONT RCH+	T. -	
E. ILLUMI	M. FRONT LCH-	U. SEEK DOWN	
F. A-ANT	N. FRONT LCH+	V. SEEK UP	
G. GND	O. REAR LCH-	W. VOL DOWN	
H. ACC	P. REAR LCH+	X. VOL UP	

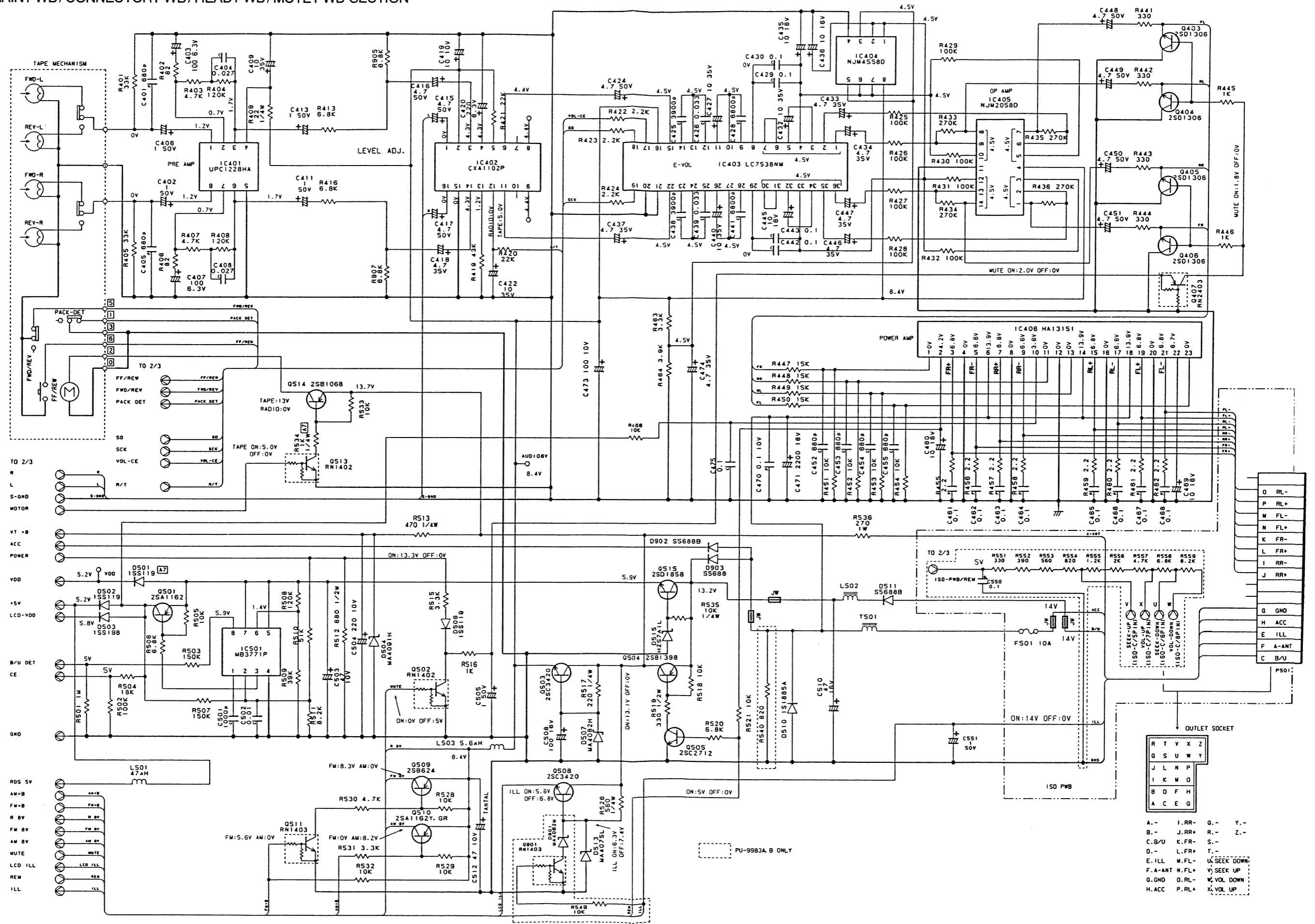


MAIN PWB SECTION

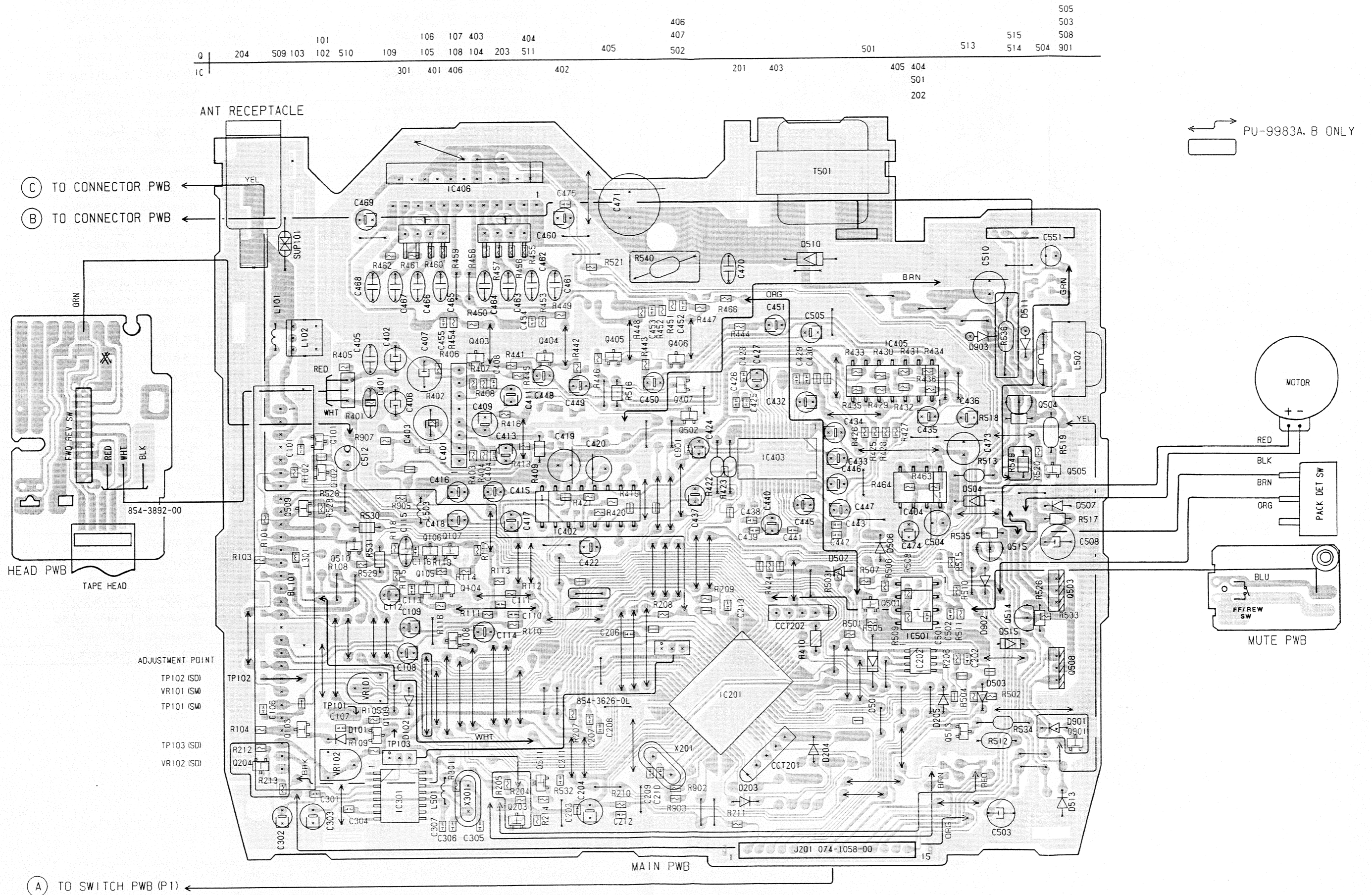


CIRCUIT DIAGRAM 3/3

MAIN PWB/CONNECTOR PWB/HEAD PWB/MUTE PWB SECTION

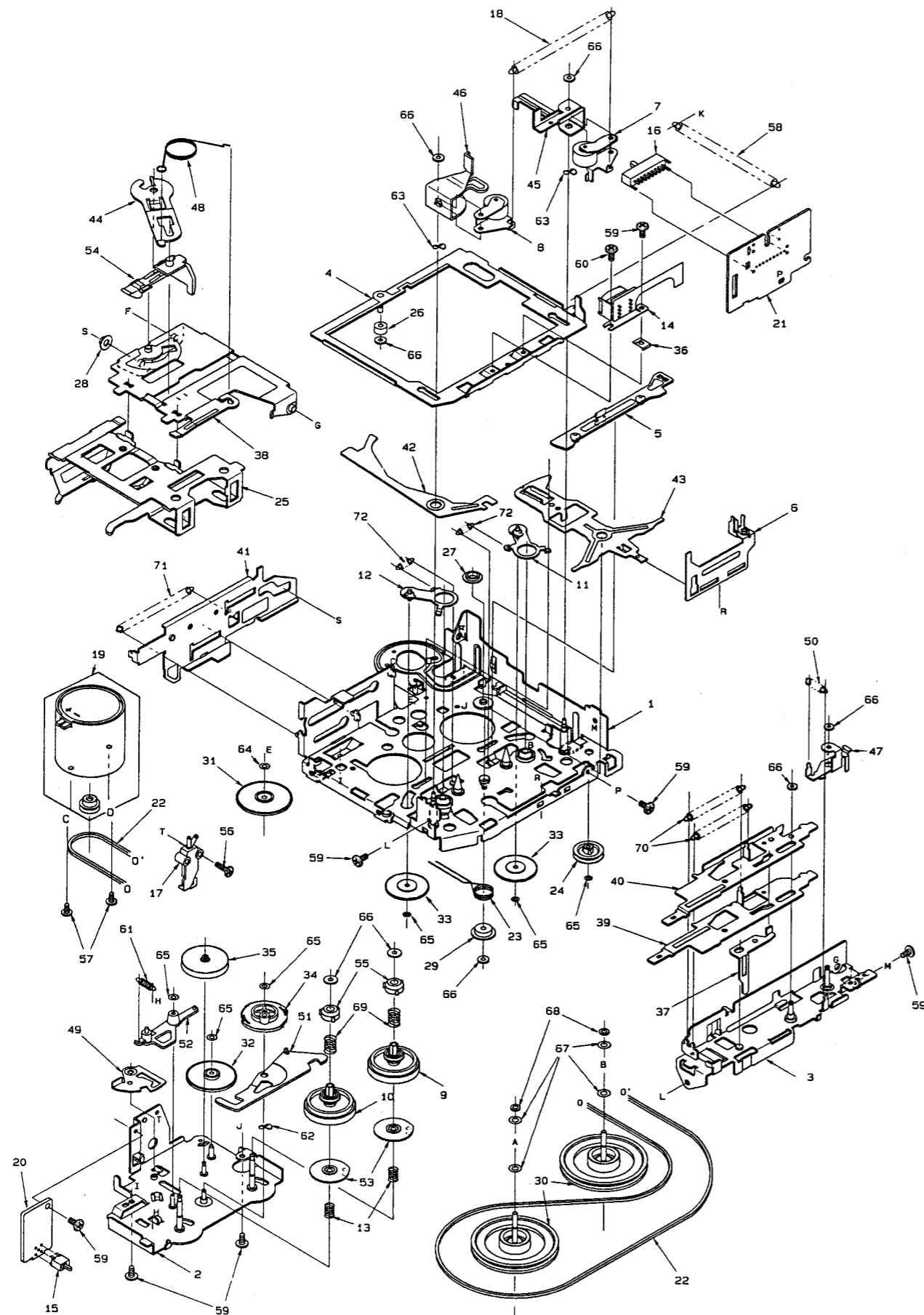


■ PRINTED WIRING BOARD 2/2
MAIN PWB/HEAD PWB/MUTE PWB SECTION



■ EXPLODED VIEW · PARTS LIST

TAPE MECHANISM SECTION : 930-0722-86



NO.	PART NO.	DESCRIPTION	QTY	NO.	PART NO.	DESCRIPTION	QTY
1	960-4180-05	DECK ASS'Y	1	37	630-2488-02	SELECT PLATE	1
2	960-4181-06	BOTTOM ASS'Y	1	38	630-2494-07	GUIDE ARM	1
3	960-4182-03	FRAME ASS'Y	1	39	630-2496-03	REW LEVER	1
4	960-4184-03	HEAD ASS'Y	1	40	630-2497-03	FF LEVER	1
5	960-4186-02	FF-REW-P ASS'Y	1	41	630-2498-32	EJECT LEVER-C	1
6	960-4187-01	HEAD-SW ASS'Y	1	42	630-2499-01	CHANGE LEVER	1
7	960-4188-03	ROLLER ASS'Y F	1	43	630-2501-02	CHANGE PLATE	1
8	960-4189-03	ROLLER ASS'Y R	1	44	630-2502-05	SWING ARM	1
9	960-4190-08	REEL ASS'Y F	1	45	630-2505-02	FF-REW LINK	1
10	960-4191-08	REEL ASS'Y R	1	46	630-2506-05	RELEASE LINK	1
11	960-4192-02	IDLER ASS'Y F	1	47	630-2507-04	LOCK LINK	1
12	960-4193-02	IDLER ASS'Y R	1	48	750-2910-03	SLOT SPRING	1
13	750-2919-03	CHECK SPRING-R	2	49	630-2529-01	MUTE PLATE	1
14	011-0313-15	HEAD	1	50	750-2909-04	LOCK SPRING	1
15	013-3906-00	SWITCH (MUTE)	1	51	631-1958-05	CHECK LINK	1
16	013-3922-00	SWITCH (FWD/REV)	1	52	631-1959-01	CHANGE LINK	1
17	013-3924-00	SWITCH (PACK DET)	1	53	631-1961-03	CHECK PLATE	2
18	750-2912-01	PINTCH SPRING	1	54	631-1963-04	PACK STOPPER	1
19	SMA-141-100	MOTOR ASS'Y	1	55	631-1967-00	SLIDE BUSH	2
20	099-9126-00	MUTE PWB	1	56	714-2008-81	MACHINE SCREW	1
21	099-9669-00	HEAD PWB	1	57	716-0484-02	SCREW	2
22	602-0115-00	BELT	1	58	750-2908-02	HEAD SPRING	1
23	750-2911-01	HOLDING SPRING	1	59	716-1471-00	S-TYTE 2-3	7
24	604-0042-01	TENSION PULLEY	1	60	716-1473-01	HEAD SCREW	1
25	606-0100-05	PACK GUIDE	1	61	750-2907-03	CHANGE-L-SPRING	1
26	610-0333-01	HEAD ROLLER A	1	62	745-0752-00	PLATE SPRING	1
27	610-0334-01	HEAD ROLLER B	1	63	745-0756-00	SPRING WASHER	2
28	610-0335-02	EJECT ROLLER	1	64	746-0624-00	WASHER	1
29	610-0336-01	SP ROLLER	1	65	746-0724-00	WASHER	6
30	611-0094-01	FLYWHEEL	2	66	746-0768-00	WASHER	8
31	613-0272-10	GEAR A	1	67	746-0839-00	CAPSTAIN WASHER	4
32	613-0273-02	GEAR B	1	68	746-0869-00	WASHER	2
33	613-0274-02	IDLER GEAR	2	69	750-2564-01	SLIDE SPRING	2
34	613-0275-03	CHANGE GEAR	1	70	750-2904-02	FF-REW SPRING	2
35	613-0277-02	CHACK GEAR	1	71	750-2905-02	EJECT SPRING	1
36	630-1279-00	SPACER	1	72	750-2906-00	IDLER SPRING	2